

Title (en)

MULTI-STAGE HYDRAULIC MACHINE

Title (de)

MEHRSTUFIGE HYDRAULISCHE MASCHINE

Title (fr)

MACHINE HYDRAULIQUE À PLUSIEURS ÉTAGES

Publication

EP 3877653 B1 20230104 (DE)

Application

EP 19795550 A 20191029

Priority

- DE 102018128065 A 20181109
- EP 2019079471 W 20191029

Abstract (en)

[origin: WO2020094452A1] The invention relates to a hydraulic machine having at least two stages, said hydraulic machine comprising a shaft (1) and impeller wheels (2), wherein: each stage comprises an impeller wheel (2); each impeller wheel (2) comprises a plurality of blades (4), is connected to the shaft (1), and is of the radial type; the hydraulic machine comprises a low-pressure side and a high-pressure side; a first stage is arranged adjacent to the low-pressure side of the hydraulic machine; and the number of blades (4) of the impeller wheel (2) of the first stage is smaller than the number of blades (4) of any impeller wheel (2) of the remaining stages.

IPC 8 full level

F04D 1/06 (2006.01); **F03B 3/12** (2006.01); **F04D 29/22** (2006.01)

CPC (source: EP)

F03B 3/125 (2013.01); **F04D 1/063** (2013.01); **F04D 29/2205** (2013.01); **F03B 3/10** (2013.01); **Y02E 10/20** (2013.01)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

DE 102018128065 A1 20200514; DE 102018128065 B4 20220317; EP 3877653 A1 20210915; EP 3877653 B1 20230104;
WO 2020094452 A1 20200514

DOCDB simple family (application)

DE 102018128065 A 20181109; EP 19795550 A 20191029; EP 2019079471 W 20191029